

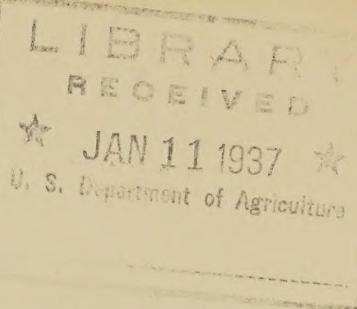
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UNITED STATES DEPARTMENT OF AGRICULTURE  
Bureau of Agricultural Engineering  
Washington, D. C.



M-1

December 28, 1936

MEMORANDUM IN REGARD TO CHANGE ORDERS

Attention of all field engineers is called especially to the following statement which is to be found in every set of specifications for contract work issued by the Department of Agriculture:

"No deviation from the general plans or approved working drawings will be permitted without the written order of the contracting officer"

The contracting officer is the Secretary of Agriculture. No one else has authority to make changes in plans, specifications or contracts. During 1935 and 1936 too many instances have occurred where either the field engineer instructed or permitted the contractor to make changes in the approved plans or drawings without first obtaining a change order from the contracting officer. It has been necessary to devote a large amount of time to straightening out the difficulties caused by failure to secure change orders promptly. The time to secure a change order is at the time that it is decided a change is necessary but before the work is actually started.

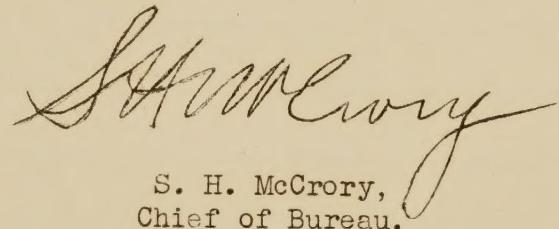
It is the duty of the district engineer to make proper request for change orders as the need for them becomes evident, submitting the request in the form which has heretofore been supplied to all district engineers. It is realized that in the past many of the changes made without authority have been due to the desire of the engineer to keep the job going. However, proceeding without authority is liable to produce such serious consequences that the practice must be stopped. It is expected that now we have opportunity to plan more carefully, that the necessity for changes will in the future be less than heretofore. However, as work progresses and conditions on the ground are fully developed, there is always a chance that changes in plans may become necessary. In such cases do not hesitate to forward immediately the standard form request for the necessary authority. We will do everything possible here to secure quick action.



On all future contracts I desire to be kept in closer touch with every job than in the past. In order that this may be accomplished a new form has been prepared and should be supplied by the District Engineer to each resident engineer. For each job the items should be filled in exactly as in the bidding schedule, except that dollars and cents need not appear. The form may then be used as a master sheet to be brought up-to-date every month when the monthly estimate is made. Two copies are to accompany each monthly estimate, one copy is to be sent to the District Engineer for his files, one copy is to be kept in the file of the resident engineer, and one copy is to be supplied to the contractor. The form will be signed by the resident engineer in the appropriate place and approved by the District Engineer. If there are any explanations to be noted in the statement in regard to change orders at the bottom of the first page, they should be inserted in the blank space. Sample copies of this form are attached.

I do not wish to seem arbitrary in this matter of change orders but the time has come when the regulations must be observed. District engineers will be expected to hold their resident engineers directly accountable, while we will place the full responsibility on the District offices.

Very truly yours,



A handwritten signature in cursive ink, appearing to read "S. H. McCrory".

S. H. McCrory,  
Chief of Bureau.



BUREAU OF AGRICULTURAL ENGINEERING, U. S. DEPARTMENT OF AGRICULTURE

MONTHLY REPORT (To Accompany Monthly Estimates) Sheet \_\_\_ of \_\_\_ sheets

Contract No. \_\_\_\_\_ On- Project \_\_\_\_\_ State \_\_\_\_\_

For \_\_\_\_\_ Month \_\_\_\_\_ Year \_\_\_\_\_



BUREAU OF AGRICULTURAL ENGINEERING, U. S. DEPARTMENT OF AGRICULTURE

MONTHLY REPORT (To Accompany Monthly Estimates) Sheet \_\_\_ of \_\_\_ sheets

Contract No. \_\_\_\_\_ On Project \_\_\_\_\_ State \_\_\_\_\_

For \_\_\_\_\_ Month \_\_\_\_\_ Year \_\_\_\_\_

I certify that no changes in plans or specifications have been made on this contract, except those duly authorized by approved change orders

Resident Engr.

District Engr.

Date \_\_\_\_\_, 193 \_\_\_\_



Where streams, ditches, or dry water courses are encountered, the contour lines must be run up to point where the contours cross on the bottom. It is very important to know exactly how far upstream a given pool level will back. At the points where contours cross a stream, elevation of top of bank and depth of water in stream or ditch will be shown.

When Land Acquisition surveys have already been made, you should carefully tie into these surveys at frequent intervals. When pool contour and Land Acquisition surveys are being run simultaneously, every possible effort must be made to cooperate in tying the surveys together. No duplication of work should be necessary by either party.

When our surveys are run before Land Acquisition has put a party in the field, the contours must be fixed and so well marked on the ground that Land Acquisition will have no difficulty in tying in to our work.

After surveys are made, plot accurately on the topographic map. If contours on the original, or reconnaissance, map are shown to be inaccurate, make the necessary alterations. Such corrections may necessitate the changing of other contours above, below, and between the two pool contours. Topography close to the shore lines on the resultant topographic map must be accurate. This map should show the position of benchmarks, landmarks, fences, houses, etc. Traverse lines with distances and bearings should be shown in red. Copies of this map will be supplied to the Division of Land Acquisition for their use in fixing the final land boundaries.

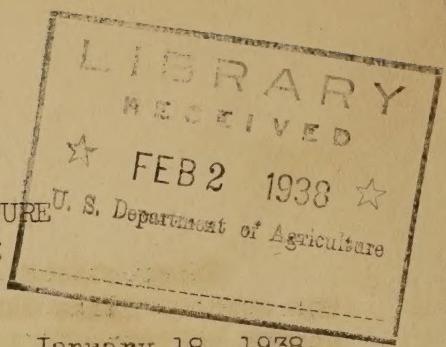
On projects where pool elevation will not affect purchase of land, only the normal pool contour will be located. The same procedure will be followed in locating it that has been outlined for situations where both spillway and maximum pool elevations are to be run.

Please acknowledge receipt of these instructions.

S. H. McCrory,  
Chief of Bureau.

*W.M. 3 Me*

UNITED STATES DEPARTMENT OF AGRICULTURE  
Bureau of Agricultural Engineering  
Washington, D. C.



M-1

January 18, 1938

MEMORANDUM TO DISTRICT ENGINEERS  
Migratory Waterfowl Construction Program

Administration

Our work has reached the point where standard methods should be adopted by field parties. In the future the procedure outlined below will be followed on all projects where the limits of Refuge property to be purchased is affected by the location of the border contours of artificial pools:

After spillway and maximum pool elevations are adopted, run accurate levels and traverses on both the normal pool and maximum pool levels. Maximum pool will be assumed to be at least 3 feet above spillway elevation unless approval is given by the Chief or Acting Chief of Bureau. In some localities on flashy streams maximum pool level of more than 3 feet above spillway elevation may be economical. Fix the position of these two contours on the ground by use of stakes or other form of markers which can easily be found and identified. The surveys should be at least as accurate as land surveys.

Levels must be accurately checked and traverses are to be made with transit. Shots must be taken at least every 200 feet along each pool contour. If the relief is so flat as to throw the normal and flood contours too far apart to be reached from the same instrument setup, then two separate traverses should be run. We do not approve of plane table for this work but in order to secure reasonable speed a transit may be used both for levels and traverses but only after a series of accurate benchmarks not more than one mile apart have been placed along a closed level circuit, made reasonably close to the contour lines. All lines of levels should be closed or checked with known benchmarks to insure accurate contours. Benchmarks should be plainly marked and tied in with horizontal as well as vertical control.

Pool line surveys must be tied to all known land lines and corners. If such corners are not to be found close to the pool contours, the party should run traverses to enough known points to definitely fix pool lines in respect to the land ownership. The party should also tie in with all natural objects in reach, such as fences, fence corners, houses, streams, dams, dikes, bridges, road culverts, and unusual rock formations.